Serial Number: 10/612,712 Filing Date: June 30, 2003

Title: PROBE OF UNDER SIDE OF COMPONENT THROUGH OPENING IN A PRINTED CIRCUIT BOARD

Assignee: Intel Corporation

REMARKS

This responds to the Office Action mailed on March 23, 2006. By this response, claims 1, 15 and 18 are amended, and claim 21 is canceled. No new claims were added. As a result, claims 1-8, 15-20, and 22-27 are now pending in this application.

§102 Rejection of the Claims

A. Rejection under 35 USC § 102: Claims 1-8 and 15-27 were rejected under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

B. Response to 35 USC § 102 Rejection: Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added).

Claim 1, as amended, now recites "...an element having a surface for electrically contacting a first plane in a device under test; and a probe having a free end positioned in a second plane for electrically contacting the second plane in the device under test." The Examiner contends that figure 6 of Stierman et al. teaches the invention of claim 1. However, element 54 of Stierman et al. is not associated with the device under test. Element 54 is "...a conductive sheet 54 such as for example a disk ellipse or other portion of wire mesh attached to the fourn input from the pulse generator 20. The center contact portion 44 is connected to the input 22 in the same manner as was shown in FIG. 3." (See paragraph 24 of Stierman et al.). The conductive sheet is attached to the elongated support substrate 36 rather than being associated with the device under test. Therefore, it appears that the Stierman et al. reference fails to teach one of the elements of claim 1 since each of the two elements is attached to a device

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under test. Stierman et al. only attaches to one plane in the device under test. Accordingly, claim 1 as now amended overcomes the Stierman et al. reference since the Stierman reference fails to teach each and every element of the invention of claim 1. Stierman et al. also fails to teach all the elements arranged as in the claim. As a result, claim 1 now also overcome the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claims 2-8 depend from claim 1 and include the limitations of claim 1 by their dependency. Since the Stierman reference fails to teach each and every element of the invention, and also fails to teach all the elements arranged as in the claims, it is submitted that claims 2-8 now also overcome the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claim 15, as now amended, recites "...a first test probe adapted to contact electrical elements in a first plane of a device under test; and a second test probe, the second test probe further comprising: an element having a surface for contacting a first plane of the device under test; and a probe having a free end positioned in a second plane adapted to contact an electrical element in the second plane of the device under test." The Stierman et al. reference fails to teach the second probe. Stierman et al. does not have a second probe for contacting the first plane and a second plane. If the Examiner contends that Stierman et al. does have the second probe, then the Stierman et al. device does not have the first probe. Steirman et al. has two single probes rather than a second probe capable of contacting both the first plane and the second plane in a device under test. Accordingly, the Stierman et al. reference fails to teach each and every element of the invention, as arranged in the claim 15. Accordingly, claim 15 now overcomes the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claims 16, 17, and 22 depend from claim 15 and include the limitations of claim 15 by their dependency. Since the Stierman reference fails to teach each and every element of the invention, and also fails to teach all the elements arranged as in the claims, it is submitted that claims 16, 17, and 22 now also overcome the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1). Consequently, the Examiner

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contends that Stierman et al. shows a nest. Applicant disagrees and would appreciate it if the Examiner could point out the nest in this reference.

Claim 18, as amended, now recites that "...the device under test is a circuit board having an electrical component attached to a primary side of the circuit board and wherein passing a probe through a portion of the device under test includes passing a probe through an opening in the circuit board to contact the electrical component attached to the primary side of the circuit board." There is no teaching in Stierman et al. of a probe passing through a circuit board to contact an electrical component. Stierman et al. shows the ground plane extending out beyond the periphery of the electrical component in FIGs. 1A and 1B so that the probe does not extend through the printed circuit board. Accordingly, claim 18 now overcomes the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claims 19 and 20 depend from claim 18 and include the limitations of claim 18 by their dependency. Since the Stierman reference fails to teach each and every element of the invention, and also fails to teach all the elements arranged as in the claims, it is submitted that claims 19 and 20 now also overcome the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claim 21 has been cancelled thereby obviating the need to argue it with respect to the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claim 23 recites "...contacting a plurality of pads located in a first plane on the device under test; and contacting at least one other pad in a second plane on the device under test substantially simultaneously as contacting the plurality of pads located in the second plane." The Steirman et al. reference fails to teach contacting a plurality of pads in the first plane on the device under test. Steirman et al. shows a contact end that contacts a single pad. In the alternative, Stierman et al. fails to show contacting a second plane in the device under test. Accordingly, claim 23 now overcomes the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Claims 24-27 depend from claim 23 and include the limitations of claim 23 by their dependency. Since the Stierman reference fails to teach each and every element of the invention,

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and also fails to teach all the elements arranged as in the claims, it is submitted that claims 24-27 now also overcome the Examiner's rejection under 35 USC § 102(e) as being anticipated by Stierman et al. (U.S. 2003/0218463 A1).

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6977) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

RICHARD S PERRY

By their Representatives, SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. Attorneys for Intel Corporation P.O. Box 2938 Minneapolis, Minnesota 55402

(612) 373-6977

Date 7/24/06

Richard E. Billion Reg. No. 32,836

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexendria, VA 22313-1450 on this 24th day of July 2006.

Name: Amy Mor. arts

Signature: